

G.K. SRIVASTAVA

Zoological Survey of India, Calcutta

## NOTES ON BORMANS SYNTYPES OF SOME SPECIES OF DERMAPTERA (INSECTA)

### INTRODUCTION

Present study is based upon the BORMANS (1894) syntypes of four species viz., *Labia ridens*; *Chelisoches feae*; *Opisthocosmia dux* and *Opisthocosmia simplex*, from Burma, available in the collections of Museo Civico di Storia Naturale « Giacomo Doria », Genova (Italy), and Institut Royal des Sciences Naturelles de Belgique, Bruxelles (Belgium). Lectotypes and Paralectotypes for these have been selected since the original material referred to by BORMANS represents only syntypes though both museums claim to possess Holotype, Type or Syntypes. Besides, 1 ♂, 1 ♀ from New Guinea, earlier determined as *Chelisoches feae* (Bormans) var. ?, is identified as *Hamaxas nigrorufus* (Burr).

It is found that syntypes of *Labia ridens* Bormans, comprise three species viz., *Chaetospania ridens* (Bormans) comb. nov.; an undescribed species based upon the material referred to as *L. ridens* var. *cyclolabia* and 1 ♀ representing third species since it does not agree with female of first two, which could not be identified upto specific level in the absence of male. *Opisthocosmia simplex* Bormans is transferred to the genus *Eparchus* Burr, discussing some intraspecific variations in this species. As a result *Eparchus oberthuri* Borelli, from Bhutan; *E. inermis* Hebard from India: W. Bengal, Kurseong and *E. panfilovi* Bey-Bienko, from China, Yunnan are treated as synonym of this species. For *Hamaxas feae* (Bormans) and *Eparchus dux* (Bormans) some additional information is provided.

I am thankful to the Director, Zoological Survey of India, Calcutta, for providing necessary facilities during the course of present study. My thanks are also due to Dr. R. Poggi, Genova Museum and Dr. G. Demoulin, Institut Royal des Sciences Naturelles de Belgique for placing at my disposal their valuable collections.

## Abbreviations used:

M.S.N.G.: Museo Civico di Storia Naturale « Giacomo Doria », Genova, Italy.

I.R.S.N.B.: Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium.

Z.S.I.: Zoological Survey of India, Calcutta, India.

## LABIIDAE

## LABIINAE

**Chaetospania ridens** (Bormans) comb. nov. Figs. 1-8

*Labia ridens* Bormans (pars), 1894, *Ann. Mus. Civ. St. nat. Genova*, 14: 388 (♂, ♀; Birmanie: Carin Chebà, 900-1100 m, excluding var. cyclolabia and 1 ex. var. ♀, Rangoon); BURR, 1910, *Fauna Brit. India Dermaptera*: 121, fig. 42a (only var. macrolabia, excluding var. cyclolabia and fig. 42); BURR, 1912, *Ann. naturh. Hofmus.*, Wien, 26: 88 (4 ♂, 1 ♀ ex. BORMANS Syntype, stated to be similar to f. macrolabia); BORELLI, 1917, *Boll. Mus. zool. Anat. Comp., Torino*, 32 (N. 721); 1 (1 ♂, Philippines - f. macrolabia); BORELLI, 1923, *Boll. Mus. zool. Anat. Comp., Torino*, 38 (NS. 13): 8 (♂, ♀ Philippines - f. macrolabia).

## Material examined

- (1) Lectotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii. 88; non com. a BORMANS; ♂; trovato senza pene (1), -xi.75, F. CAPRA (M.S.N.G.); agrees with ♂ listed under item 6 in all morphological details which possesses ♂ genitalia.
- (2) Paralectotype ♀, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; in BORMANS handwriting *Labia ridens* ♂ sp. nov.; Typus, in red; *ridens* Borm. another handwritten label but not in BORMANS hand; trovato senza pene, -xi.1975, F. Capra (M.S.N.G.). Although this specimen has been labelled as ♂ it is a ♀ since it possesses 7 visible sternites, no traceable genitalia and the shape of forceps and pygidium are identical to ♀ listed under items 5 and 6.
- (3) Paralectotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88, non com. a BORMANS; genitalia mounted by F. CAPRA on xi.75 between two celloid slips and pinned with the specimen (M.S.N.G.).

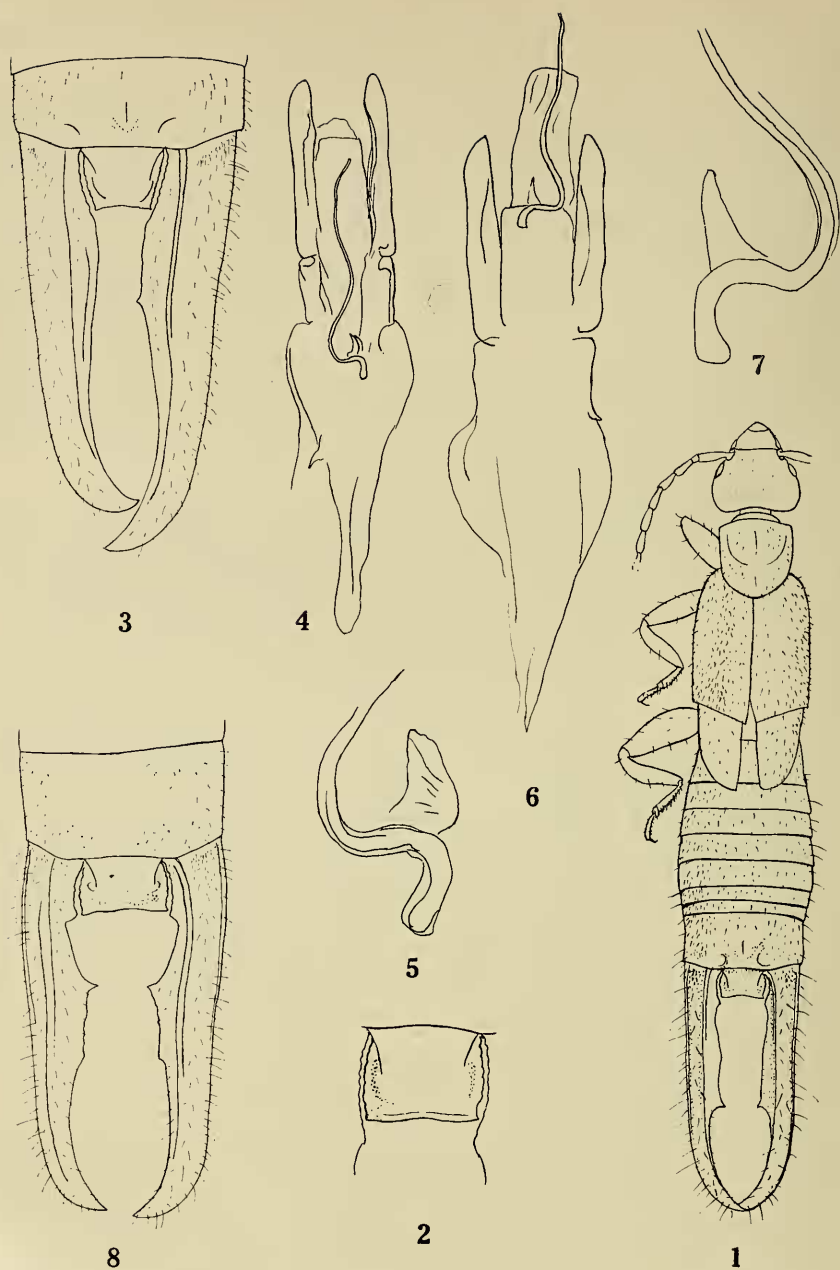
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(1) The specimens found without genitalia were examined by M. BURR for the preparation of the volume on Dermaptera for « Fauna of British India »; the slides with the genitalia should be present in coll. Burr.

- (4) Paralectotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88, det. A. de BORMANS *Labia ridens* Borm. (not in BORMANS handwriting); of Ann. Mus. Genova, XXXIV, p. 338 (1894); Syn-type (in red); genitalia prepared and mounted between two coverslips and pinned with the specimen (I.R.S.N.B.).
- (5) Paralectotype ♀, all data same as under 4 above; no traceable genitalia (I.R.S.N.B.).
- (6) Paralectotype ♀; all data same as under 4 above except one additional label not in BORMANS handwriting as *L. ridens* n. sp.; no traceable genitalia. This specimen is identical in most morphological details to specimens listed under 2 and 5 (I.R.S.N.B.).

Head, elytra and wings black; antennae blackish brown, basal segment often darker; pronotum and legs clear yellow; abdomen and pygidium testaceous brown, former blackish on certain tergites; forceps testaceous yellow. Form depressed, pubescent, forceps and sides of abdominal tergites with long pubescens.

♂: Head longer than broad, depressed, sutures obsolete, hind margin emarginate. Eyes much smaller than post-ocular length. Antennal segments stout; 1st about as long as the distance between antennal bases, narrowed at base; 2nd small about as long as broad; 3rd long and slender; 4th stouter, slightly longer than preceding but shorter than 5th, remaining segments gradually increasing in length and thinning, each narrowed basally. Pronotum about as long as broad or slightly longer, anteriorly convex, sides deplanate, straight, feebly converging posteriorly, hind margin and angles broadly rounded; prozona raised and metazona depressed, median sulcus feebly marked in middle only. Elytra and wings normal, feebly punctulate, former with hind margin obliquely truncate. Legs normal. Abdomen feebly depressed, obscurely punctulate, almost parallel sided, lateral folds on 3rd and 4th tergites obsolete. Ultimate tergite transverse, smooth, moderately sloping backwards, depressed in middle posteriorly, feebly raised above the bases of forceps, median sulcus distinct in posterior half only, hind margin almost straight in middle, laterally oblique and emarginate, posterolateral angles a little projecting. Penultimate sternite broadly rounded posteriorly. Pygidium distinct, slightly wider than long, at base narrower and declivient backwards, sides convex, serrated, hind margin deplanate with slight emargination in middle and angles with minute point. Forceps with branches separated at base by pygidium, straight in basal two thirds,



Figs. 1-8 - *Chaetospania ridens* (Bormans): Lectotype ♂; 1. Dorsal view; 2. Pygidium enlarged. Paralectotype ♂ (3) (forceps with minor development); 3. Ultimate tergite and forceps; 4. Genitalia; 5. Basal portion of virga enlarged. Paralectotype ♂ (4); 6. Genitalia; 7. Basal portion of virga enlarged. Paralectotype ♀ (2); 8. Ultimate tergite and forceps.

N.B. — Numbers mentioned within parenthesis against Paralectotypes and other specimens refer to Sl. Nos. on which these are listed under the heading material examined in the text.



thence gradually curving to hooked, pointed apices which meet or cross, trigonal in basal one third afterwards ridge gradually dying out and depressed, inner ventral margin forming a flange, armed with a blunt tooth at the level of hind margin of pygidium thence margin undulate and terminating into sharp pointed tooth at apical one third. Genitalia as seen in figures 4 to 7.

♀: Agree with ♂ in most characters except that the abdomen with seven visible sternites and tergites; pygidium strongly transverse, and forceps with inner ventral flange armed with a blunt tooth at the level of hind margin of pygidium, thence margin smooth and curved and provided with another sharp tooth, a little before middle, afterwards margin irregular upto a little beyond basal two thirds.

**M e a s u r e m e n t s** (in mm). Number below each specimen within brackets refers to Sl. No. on which these are listed under the material examined.

	Lectotype		Paralectotypes			
	♂ (1)	♀ (2)	♂ (3)	♂ (4)	♀ (5)	♀ (6)
Length of pronotum	1.2	1.4	1.0	1.1	1.4	1.2
Width of pronotum	1.2	1.3	9.0	1.1	1.35	1.15
Length of pygidium	0.5	0.6	0.395	0.5	0.7	0.5
Width of pygidium	0.7	0.9	0.455	0.7	1.0	0.9
Length of body	9.0	11.3	7.1	9.2	10.4	8.9
Length of forceps	4.1	4.0	2.6	4.1	3.9	3.5

**R e m a r k s**. BORMANS (1894) confused three different species under this name. It has been found after the re-examination of BORMANS syntypes that specimens referred to as *Labia ridens* var. *cyclobia* belong to an apparently undescribed species for which a new name has been proposed and one female differs from females of both these species but in the absence of male it not possible to determine it upto specific level.

This species is referred to the genus *Chaetospania* on account of strongly pubescent and depressed body. Pygidium in both sexes is distinct and forceps are armed internally which perhaps lead BORMANS to consider ♂ for ♀. But on close examinations ♀ can be easily differentiated from the opposite sex in having seven visible abdominal tergites

and sternites, more strongly transverse pygidium, different inner armature of forceps and absence of any traceable genitalia.

BORMANS (1894) in his original description mentions 2 ♂, 3 ♀, var. *cyclolabia* 2 ♂, 2 ♀ from Carin Chebà and 1 ex. var. ♀ Rangoon, Burma but in subsequent publications i.e., BURR (1912) mentions of 4 ♂, 1 ♀ syntypes in Wien Museum; VANSCHUYTBROECK (1969) and STEINMANN (1979) record 2 exs. syntypes as *Labia ridens* var. *cyclolabia* Bormans and 3 exs. paratypus, respectively.

Syntype material examined from M.S.N.G. and I.R.S.N.B. contain 2 ♂, 1 ♀ besides 2 ♂, 3 ♀ as var. *cyclolabia* and 1 ♂, 3 ♀, respectively. The syntype material examined from these two museums and from published records taken together total 22 exs. whereas according to original publication, BORMANS lists only 10 exs. From various labels the material present in Museo Civico of Genova and I.R.S.N.B. appears to belong to syntypic series.

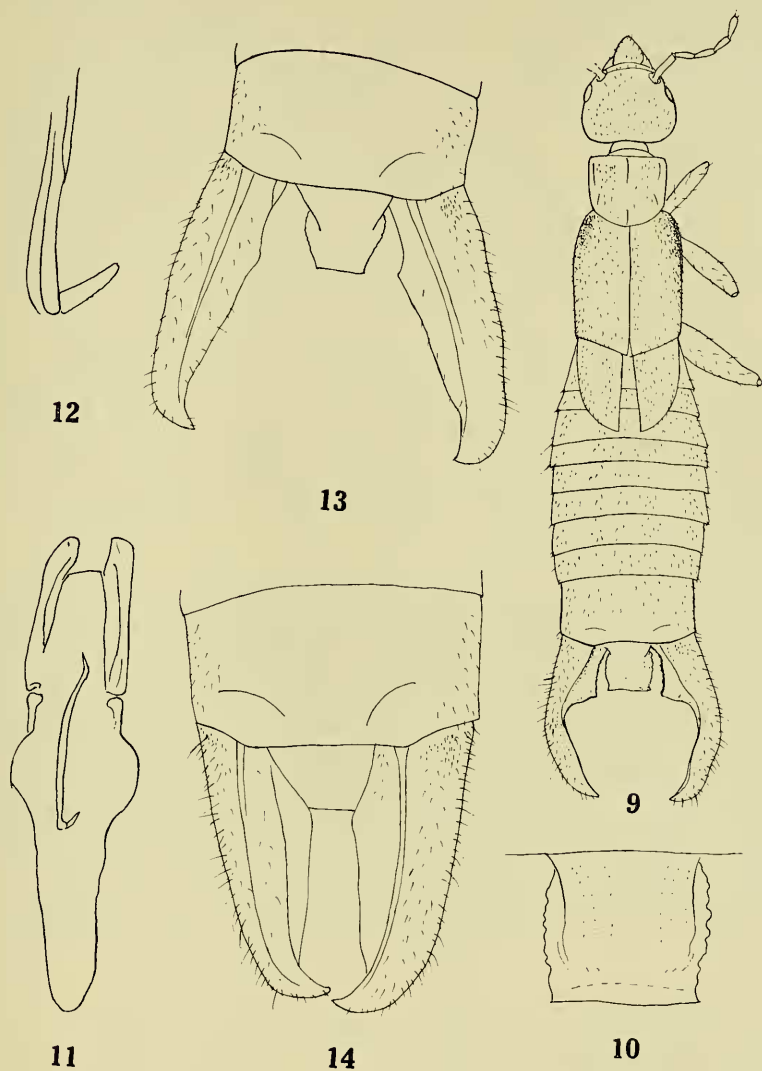
**Distribution.** Burma and Philippine Isls.

### ***Chaetospania bormansi* sp. nov. Figs. 9-14**

*Labia ridens* Bormans (pars), 1894, *Ann. Mus. Civ. Stor. nat. Genova*, 14: 338 (♂, ♀ var. *cyclolabia* and 1 ex. var. Rangoon); BURR, 1910, *Fauna Brit. India, Dermaptera*: 121, fig. 42 (var. *cyclolabia*); SRIVASTAVA, 1979, *J. zool. Soc. India*, 27 (1 & 2): 108, figs. 3A-F; VANSCHUYTBROECK, P. 1969, *Bull. Inst. r. Sci. nat. Belg.*, 45 (41): 11 (var. *cyclolabia*).

Head, elytra and wings black, other parts testaceous yellow or brown. Form moderately depressed; finely pubescent, sides of abdomen and forceps with long pubescence.

♂: Head about as long as broad, cardiform, smooth, frons depressed occiput feebly raised, sutures obsolete but marked by faint depression, hind margin slightly emarginate in middle. Eyes much smaller than post-ocular area. Antennae 12-segmented or more, 1st long, narrowed at base, about as long as the distance between antennal bases; 2nd small, about as long as broad; 3rd long and slender; 4th as long 3rd; 5th onwards segments stouter except a few pre-apical ones slightly thinner and gradually increasing in length. Pronotum about as long as broad, smooth, anteriorly and on sides straight, latter depressed and parallel, postero-lateral angles and margin broadly rounded, median sulcus distinct; prozona weakly raised and poorly differentiated from flat metazona. Legs short, hind tarsi with metatarsus equal to combined



Figs. 9-14 - *Chaetospania bormansi* sp. nov.; Holotype ♂; 9. Dorsal view; 10. Pygidium enlarged; 11. Genitalia; 12. Basal portion of virga enlarged. ♀ (5); 13. Ultimate tergite, pygidium and forceps. ♀ (4); 14. Ultimate tergite and forceps.

length pro and mesotarsus. Elytra and wings well developed, feebly punctate, former with-hind margin obliquely truncate. Abdomen long and slender, moderately depressed, obscurely punctate, slightly enlarged in middle, sides of segments convex, lateral tubercles on 3rd and 4th tergites obsolete. Penultimate sternite broadly rounded posteriorly. Ultimate tergite transverse, smooth, depressed in middle posteriorly and feebly raised above corresponding the bases of forceps, hind margin almost straight in middle, laterally oblique. Pygidium distinct, slightly longer than broad, at base narrowed, declivient in basal half, afterwards flat and laminate, sides convex, serrated, postero-lateral angles with minute point directed ventro-posteriorly and hind margin feebly convex and area above close to margin in middle raised (in Holotype) or with faint tubercle in middle (in ♂ from Manipur). Forceps with branches separated at base by the pygidium, depressed, strongly bowed or slightly elongated, internally at base with a triangular lamina ventrally, extending upto the level of hind margin of pygidium, free margin serrated, hind margin with a faint tubercle in middle, inner margin afterwards wavy and tips gently hooked and pointed. Genitalia as seen in figs. 11 and 12.

♀: Agree with male in most characters except ultimate tergite which is comparatively narrowed posteriorly, pygidium about as long as broad, broader at base, declivient, apically narrowed and flat, sides convex, serrated, hind margin straight (generally sides partly covered by forceps) and forceps simple and straight, inner margin ventrally forming a flange, emarginate near base afterwards strongly projecting with free margin smooth, dying out a little before apex.

**Measurements** (in mm). Numbers below each specimen within brackets refer to Sl.No. on which these are listed under the material examined.

	Holotype	Paratypes		Others	
	♂ (1)	♂ (2)	♀ (3)	♀	♀
Length of pronotum	0.71	0.71	0.80	0.80	0.8-0.9
Width of pronotum	0.78	0.78	0.85	0.85	0.85-0.9
Length of pygidium	0.52	0.45	0.4	0.4	0.4-0.5
Width of pygidium	0.52	0.39	0.4	0.4	0.4-0.5
Length of body	6.1	5.5	6.3	6.2	6.3-6.9
Length of forceps	1.7	1.5	1.5	1.6	1.5-1.7

## Material examined

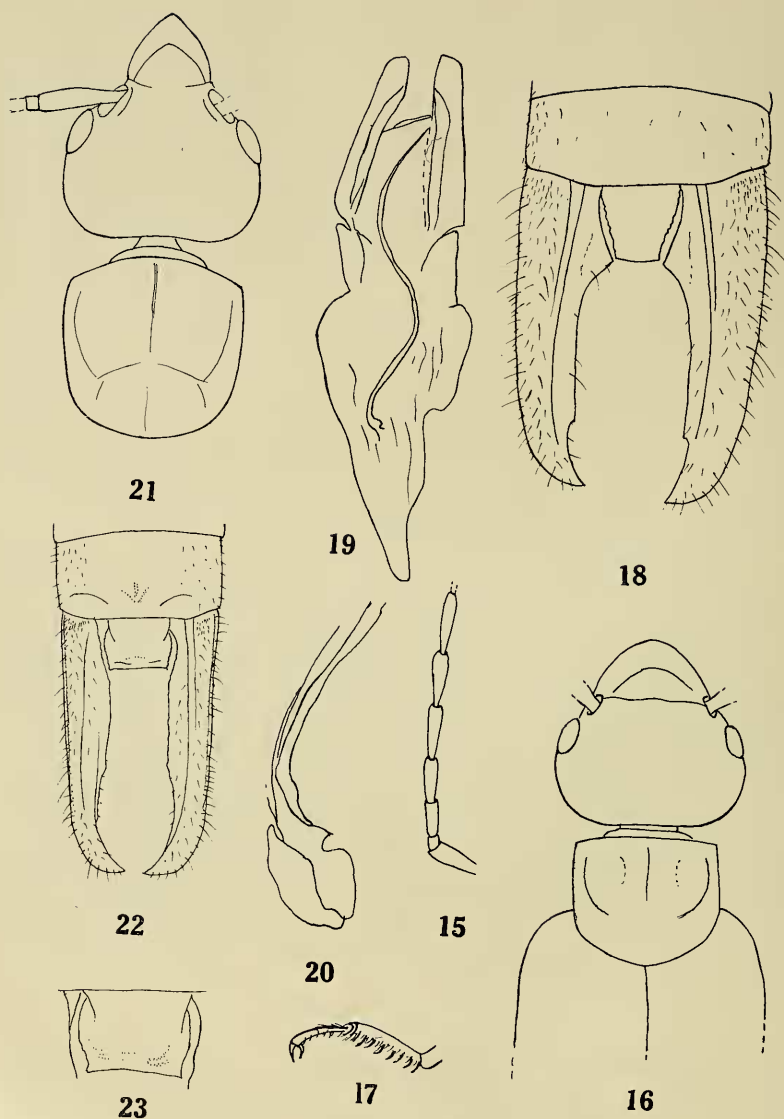
- (1) Holotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; *Labia ridens* sp. nov. ♂ var. cyclolabia - in BORMANS handwriting, Typus, in red; *ridens* var. Borm. cyclolabia Borm., another hand written label but not in BORMANS hand; ♂ genitalia mounted between coverslips by F. CAPRA and pinned with the specimen (M.S.N.G.).
- (2) Paratype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; *Labia ridens* sp. nov. ♂ cyclolabia in BORMANS handwriting, *Labia ridens* cyclolabia Paratype - in CAPRA's handwriting (M.S.N.G.).
- (3) Paratype ♀, labelled as Rangoon, Birmania, Fea, v-vii.87; *Labia ridens* sp. nov. ♀ var., in BORMANS handwriting (M.S.N.G.).
- (4) ♀, labelled as Teinzò, Birmania, Fea, Maggio, 1886 (M.S.N.G.).
- (5) ♀, labelled as Tenasserim, Kawkareet, Fea, Gen. Febr. 1887; ♀ species vicina a *L. ridens*, in BORELLI's handwriting (M.S.N.G.).
- (6) 1 ♂, 1 ♀, India, Assam, Jatinga, 24.x.1978, S. Biswas, det. G.K. SRIVASTAVA as *Labia ridens* Bormans (Z.S.I.).
- (7) 1 ♂, India, Manipur, Western Dist., Gulabthal, St. No. 1., 3.ii.1975, P.T. Cherian, det. G.K. SRIVASTAVA as *Labia ridens* Bormans (Z.S.I.).

**Remarks.** This species is included in the genus *Chaetospania* Karsch, on account of depressed head and sides of abdominal segments and forceps clad with long and short pubescence. It was confused with *Cheatospania ridens* (Bormans) as its cyclolabic form but differs by the shape of pygidium, forceps and genitalia, especially parameres and basal part of virga in ♂ and shape of forceps and pygidium in ♀. *Chaetospania mendax* Borelli (1932) from Burma, resembles closely with this species but can be easily separated by having forceps somewhat straight, with inner basal tooth weakly developed and followed by another smaller tooth, a little before apex and genitalia with comparatively longer and undulate, virga (Figs. 15-20)

**Distribution.** India and Burma.

***Chaetospania* sp. Figs. 21-23**

**Material examined.** 1 ♀; labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; det. A. DE BORMANS, *Labia ridens* Bormans; syntype (I.R.S.N.B.).



Figs. 15-23: *Chaetospania mendax* Borelli: ♂, 15. A few basal antennal segments; 16. Anterior portion of body; 17. Hind tarsus; 18. Ultimate tergite and forceps; 19. Genitalia; 20. Basal portion of virga enlarged. *Chaetospania* sp. ♀; 21. Head and pronotum; 22. Ultimate tergite and forceps; 23. Pygidium enlarged.



## Measurements (in mm) ♀

Length of head	1.3
Length of pronotum	1.2
Width of pronotum	1.1
Length of pygidium	0.5
Width of pygidium	0.65
Length of body	8.8
Length of forceps	2.7

Remarks. This is a female specimen because it possesses seven visible tergites and sternites and no traceable genitalia. It shows close resemblance with female of *Chaetospania ridens* (Bormans) but differs by the forceps, especially the shape of inner flange in being finely crenulate. In the absence of ♂ it is not possible to identify it up to species level.

## CHELISOCHIDAE

## CHELISOCHINAE

**Hamaxas feae** (Bormans) Figs. 24-29

*Chelisoche feae* Bormans, 1894, *Ann. Mus. Civ. St. nat. Genova*, (2) 4: 393 (2♂, 3♀, Hab. Carin Chebà, 900-1000 m, Mai-December).

Material examined. (1) Lectotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; Typus, in red; *Chelisoche feae* sp. nov., ♂ - in BORMANS handwriting; Feae Borm. - not in BORMANS hand; Genitalia mounted by G.K. SRIVASTAVA between two coverslips and pinned with the specimen (M.S.N.G.).

(2) Paralectotype ♀, labelled as Carin Chebà, 900-1000 m, L. Fea, xii.87; Typus, in red, *Chelisoche feae* sp. nov. ♀ - in BORMANS handwriting (M.S.N.G.).

(3) Paralectotype ♀, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; *Chel. feae* n. sp. probably not in BORMANS hand; Holotype, printed in black on pink label (I.R.S.N.B.).

Measurements (in mm). Number below each specimen within brackets refers to Sl.No. on which these are listed under the material examined.

	Lectotype	Paralectotypes	
	♂ (1)	♀ (2)	♀ (3)
Length of pronotum	1.5	1.2	1.4
Width of pronotum	1.35	1.2	1.3
Length of body	9.8	8.8	8.2
Length of forceps	4.2	1.5	1.65

**Remarks.** Though BORMANS (1894) description is adequate, the additional information will be of much use.

Head smooth, occiput feebly raised, sutures obsolete, transverse, sutures marked by faint depression, hind margin feebly sinuate in middle. Eyes small, much shorter than genae in length. 1st antennal segment about as long as the distance between antennal bases. Abdominal tergites moderately convex, obscurely punctate, sides of segments convex. Ultimate tergite transverse, obscurely punctate, with a rectangular depression in middle posteriorly, the area of depression from base to apex sloping with two minute tubercles along the median line basally, laterally margin raised with a tooth, posteriorly along the hind margin with a pair of distantly placed tubercles. Pygidium vertical, narrowed apically with postero-lateral angles produced into minute point and margin slightly emarginate. Genitalia as seen in Figs. 27 and 28.

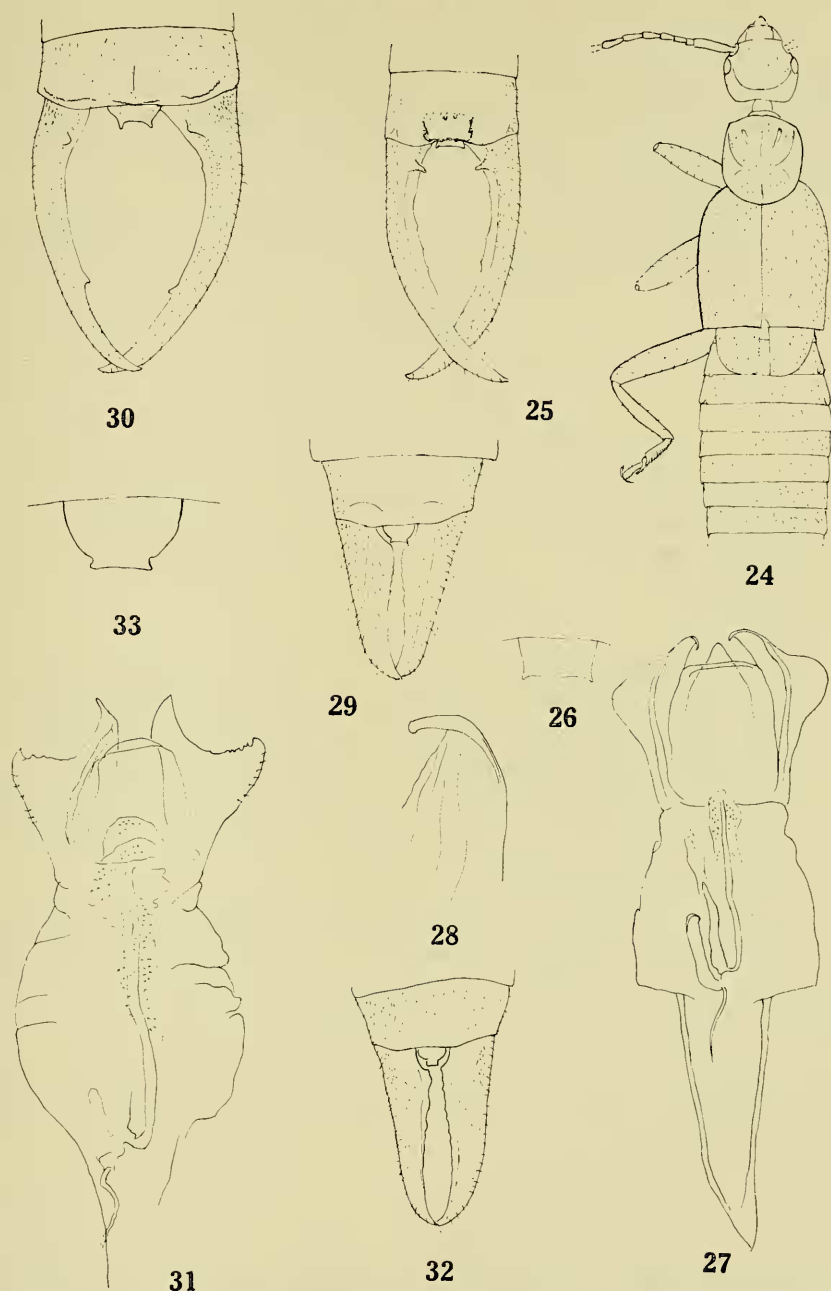
### **Hamaxas nigrorufus** (Burr) Figs. 30-33

*Spongiphora nigrorufa* Burr, 1902, *Term. Fuz.*, 25: 480 (1 ♂, 2 ♀; New Guinea: Stephensort (Astrolabe Bay) and Simbang (Huon Gulf).

**Material examined.** 1 ♂, labelled as N. Guinea Mer., Kapakapa, Mag. Giugno 1891, L. Loria; *Chelisoches feae* Var. ?; genitalia prepared and mounted between two coverslips and pinned with the specimen; 1 ♀; N. Guinea, Ighibirei, Loria, July-Aug. 1890.

### **Measurements** (in mm)

	♂	♀
Length of head	1.3	1.3
Width of head	1.2	1.3
Length of pronotum	1.3	1.3
Width of pronotum	1.2	1.2
Length of body	8.7	8.9
Length of forceps	3.0	1.9



Figs. 24-33: *Hamaxas feae* (Bormans): Lectotype ♂; 24. Dorsal view except ultimate tergite and forceps; 25. Ultimate tergite and forceps; 26. Pygidium enlarged; 27. Genitalia; 28. Tip of paramere enlarged. Paralectotype ♀ (2); 29. Ultimate tergite and forceps. *Hamaxas nigrorufus* (Burr) ♂; 30. Ultimate tergite and forceps; 31. Genitalia ♀; 32. Ultimate tergite and forceps; 33. Pygidium enlarged.

**Remarks.** The present material agrees well with the original description of the species except that the male genitalia is provided with a few minute teeth along the anterior external margin close to outer angle which is also sharply pointed and virga surrounded by a sheat bearing minute teeth.

**Distribution.** Oriental Region (Celebes and Philippine Isls.); New Guinea and Pacific Islands.

#### FORFICULIDAE

#### OPISTHOCOSMIINAE

### **Eparchus dux** (Bormans) Figs. 34-41

*Opisthocosmia dux* Bormans, 1894, *Ann. Mus. Civ. St. nat. Genova*, (2) 14: 395 (2 ♂ - Hab. Carin Chebà, 900-1100 m. Mai-December; Carin Asciuii Ghecù, 1400-1500 m. Mars-Avril).

*Hypurgus dux* Burr, 1912, *Ann. naturh. Hofmus.*, Wien, 26: 98 (1 ♂ - ex BORMANS syntypes).

#### Material examined.

(1) Lectotype ♂, labelled as Carin Asciuii Ghecù, 1400-1500 m, L. Fea, iii-iv.88; *Opisthocosmia dux* ♂ sp. nov., in BORMANS handwriting; Typus, in red; *dux* Borm., not in BORMANS hand (M.S.N.G.).

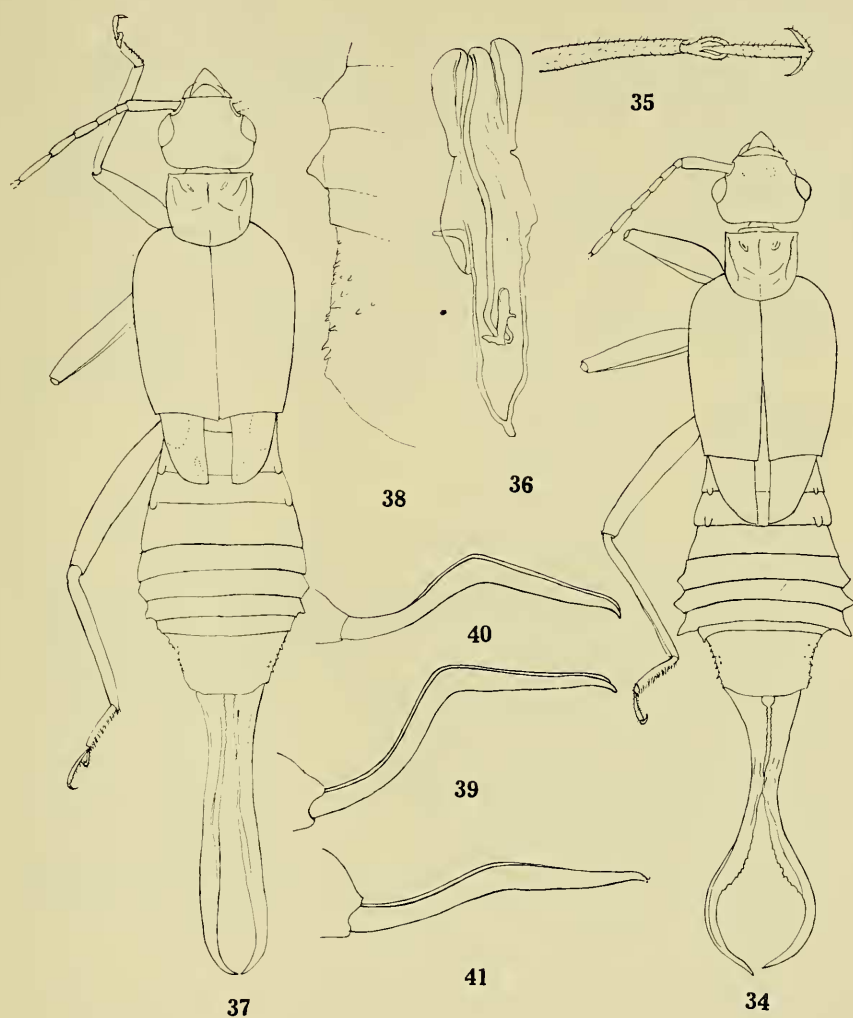
(2) Paralectotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; *Opisthocosmia dux* ♂ sp. nov., in BORMANS handwriting (M.S.N.G.).

(3) Paralectotype ♂, labelled as Carin Asciuii Ghecù, 1400-1500 m, L. Fea, iii-iv.88 (M.S.N.G.).

(4) Paralectotype ♂, labelled as Carin Chebà, 900-1100 m, L. Fea, v-xii.88; *Op. dux* sp. n. - handwritten label not by BORMANS as it does not tally with handwritten label under item 1; Holotype, on pink lable (I.R.S.N.B.).

**Measurements** (in mm). Number below each specimen within brackets refers to Sl.No. on which these are listed under the material examined.

	Lectotype	Paralectotypes		
	♂	♂	♂	♂
	(1)	(2)	(3)	(4)
Length of body	11.1	12.0	10.0	11.9
Length of forceps	5.7	5.65	5.5	6.5



Figs. 34-41: *Eparchus dux* (Bormans): Lectotype ♂; 34. Dorsal view; 35. Hind tarsus; 36. Genitalia. Paralectotype ♂ (4); 37. Dorsal view. 38. Enlarged view of a portion of a few abdominal tergites and ultimate tergite; 39-41. Forceps in profile of lectotype ♂ and paralectotype ♂♂ (2 and 4).

**Remarks.** The original description by BORMANS (1894) is adequate but it may be mentioned here that there exist some variation in the degree of development of lateral spines on the sides of abdominal segments 7th to 9th and the shape of forceps. In the lectotype ♂, sides of 7th and 8th abdominal segments are provided with a triangular fold whereas on 9th a sharp pointed, backwardly directed spine is present and forceps are strongly raised upwards in basal half and meeting in middle, thence horizontal, strongly incurved in apical one third. In paralectotypes ♂ triangular folds on the sides of abdominal segments 7th and 8th are weaker and lateral spine on 9th segment very feebly developed. And branches of forceps are weakly raised to almost horizontal or only slightly undulate in middle and almost straight. BORMANS (l.c.) mentions only «2 ♂, Hab. Carin Chebà, 900-1100 m. Mai-December, Carin Asciuii Ghecù, 1400-1500 m, Mars-Avril» but there are 2 ♂ each from both these localities as mentioned under the material examined which represent only syntypes.

**Distribution.** Burma.

**Eparchus simplex** (Bormans) Comb. Nov. Figs. 42-50

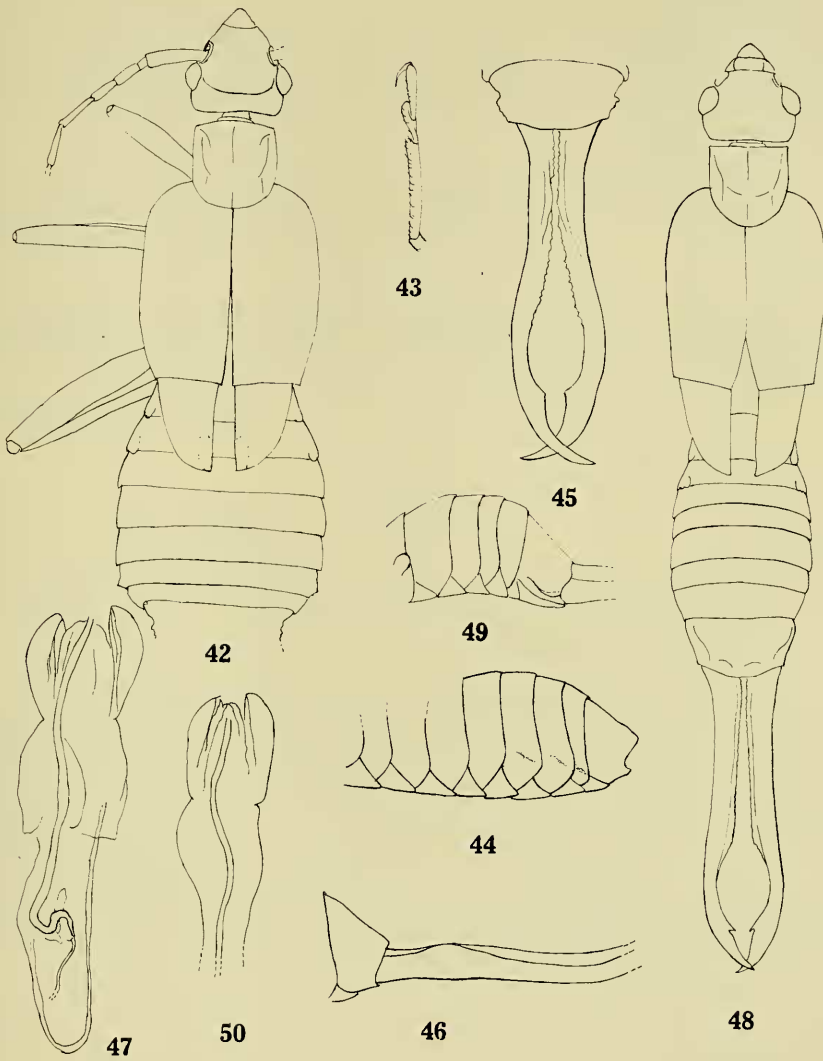
- Opisthocosmia simplex* Bormans, 1894, *Ann. Mus. Civ. St. nat. Genova*, (2) 14: 396 (9 ♂, 2 ♀; Hab. Carin Asciuii Ghecù, 1400-1500 m. Mars, Avril; Carin Asciuii Chebà, 1200-1300 m. Janvier; Carin Ghecù, 1300-1400 m, Février, Mars.)
- Cordax forcipatus* (nec Haan); BURR, 1911, *J. Asiat. Soc. Bengal* (N.S.), 7: 797 (2 ♂; E. Himalays: Kurseong, 5000'); SRIVASTAVA, 1972, *Rec. zool. Surv. India*, 66 (1-4): 141 (India: Arunachal Pradesh, Kameng Dist.).
- Hypurgus simplex*: Burr, 1912, *Ann. naturh. Hofmus.*; Wien, 26: 98 (1 ♂, 1 ♀, ex. BORMANS syntype).
- Eparchus oberthuri* Borelli, 1912, *Bull. Mus. Hist. nat. Paris*, 18: 239, fig. 4 (3 ♂, 1 ♀; Bhoutan anglais; Paris Museum). Syn. Nov.
- Eparchus inermis* Hebard, 1923, *Mem. Dept. Agric. India, Ent. Ser.*, 7: 237, pl. 21, fig. 29 (1 ♂; Shillong, Khasi Hills, Assam, Oct. 1920, Philadelphia Academy of Sciences, Philadelphia). Syn. Nov.
- Eparchus panfilovi* Bey-Bienko, 1959, *Ent. Obozr.*, 38 (3): 62 (1 ♂; China; Yunnan, Wuliang Shan near Chingtung, 1850 m, Zoological Institute AN SSSR, Leningrad). Syn. Nov.

**Material examined**

(1) Lectotype ♂, labelled as Carin Asciuii Ghecù, 1400-1500 m, L. Fea, iii-iv.88; *Opisthocosmia simplex* ♂, sp. nov., in BORMANS handwriting; Typus, in red; *simplex* Borm., handwritten, but not by BORMANS (M.S.N.G.).

(2) Paralectotype ♀, labelled as Carin Asciuii Ghecù, 1400-1500 m, L. Fea, iii-iv.88; Typus, in red; *Opisthocosmia simplex* ♀, sp. nov., in BORMANS handwriting (M.S.N.G.)





Figs. 42-50: *Eparchus simplex* (Bormans): Lectotype ♂; 42. Dorsal view except ultimate tergite and forceps; 43. Hind tarsus; 44. Abdomen in lateral view; 45. Ultimate tergite and forceps; 46. Forceps in profile; 47. Genitalia. Paralectotype ♂ (3); 48. Dorsal view; 49. Abdomen in lateral view; 50. Genitalia.

(3) Paralectotype ♂, labelled as Carin Ghecù, 1300-1400 m, L. Fea, ii-iii.88 (M.S.N.G.).

(4) Paralectotype ♀, labelled as Carin Ghecù, 1300-1400 m, L. Fea, ii-iii.88; *Opisthocosmia simplex* sp. nov. (hermaphrodite) (M.S.N.G.). This is a ♀ specimen with left arm of forceps poorly developed, comparatively thinner.

(5) Paralectotype ♂, labelled as Carin Asciuii Ghecù, 1400-1500 m, L. Fea, iii-iv.88; *Op. simplex* n. sp., handwritten label not by BORMANS; Holotype ♀, in pink; det. DE BORMANS, *Opisthocosmia simplex* Borm., another handwritten label (I.R.S.N.B.).

(6) Paralectotype ♀; all data same as under item 5 except paratype label in orange and without any handwritten det. label by BORMANS (I.R.S.N.B.).

(7) Paralectotype ♀; all data same as under item 6. (I.R.S.N.B.).

#### Measurements (in mm)

	Lectotype	Paralectotypes	
	♂	♂	♀
Length of body	11.4	8.7-11.2	11.0-11.1
Length of forceps	6.3	3.3-4.7	5.6

**Remarks.** It has been noted in the present serie that in ♂ sides of abdominal segment 7th is convex, but 8th and 9th are obtuse and recurved and all the three are provided with an oblique serrated ridge which is somewhat weaker on segment 7th. In some other ♂ specimens sides of abdominal segments are convex, but not recurved, and devoid of any carina. Ultimate tergite may be provided laterally in posterior half with one or two tubercles or a sharp oblique fold only. Forceps are generally undulate with a faint, short crest above, internally at a little distance from base or simply depressed and horizontal.

Though BORMANS (1894) description is quite adequate, it appears not to have been properly understood by subsequent workers on the group probably in the absence of diagrams. SRIVASTAVA (1972) following BURR (1911), confused this species for *Eparchus forcipatus* (Haan) known from Sumatra, Java, Borneo, Lombok, Celebes and Taiwan, with which it resembles closely but differs in having the pronotum about as long as broad and smoother abdominal tergites and forceps devoid of sharp dorsal basal tooth. And for this reason SRIVASTAVA (1976) considered

*Eparchus oberthuri* Borelli from Bhutan and *E. inermis* Hebard from Eastern Himalaya as synonym of *E. forcipatus* (Haan) but are now placed as synonym of this species. In *E. forcipatus* pronotum is distinctly longer than broad, abdomen feebly punctulate, forceps stout with sharp dorsal vertical tooth near base which may be sometimes poorly developed.

This species is transferred here to the genus *Eparchus* Burr, in having the pronotum about as long as broad or slightly longer and anteriorly equal to the width of the head. Moreover, it is congeneric with *Eparchus insignis* (Haan), type of the genus.

**Distribution.** On the basis of present study this species is distributed in India, Burma, Bhutan and China. Various records from Malay Archipelago, Sumatra and Philippines need checking in view of the prevailing confusion about the identity of the species.

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#### SUMMARY

As a result of reexamination of Bormans syntypes of four species of Dermaptera, lectotypes and paralectotypes have been designated. *Labia ridens* has been transferred to the genus *Chaetospania* Karsch, and out of its syntypes two other species have been recognised under the same genus, one new to science (*C. bormansi*) and the other represented by a female which could be identified up to generic level only. *Opisthocosmia simplex* is transferred to the genus *Eparchus* Burr, synonymising *E. oberthuri* Borelli, *E. inermis* Hebard and *E. panfilovi* Bey-Bienko. Some additional information is provided for *Hamaxas feae* and *Eparchus dux* also.

## RIASSUNTO

In seguito al riesame dei sintipi di quattro specie di Dermatteri descritti da BORMANS, sono stati designati lectotipi e paralectotipi.

*Labia ridens* è stata trasferita nel gen. *Chaetospania* Karsch e, nella serie sintipica sono state rinvenute due altre specie, una nuova per la scienza (*C. bormansi*) e l'altra, rappresentata da una sola femmina, identificabile solo a livello generico. *Opisthocosmia simplex* è trasferita nel gen. *Eparchus* Burr; vengono ritenuti suoi sinonimi *E. oberthuri* Borelli, *E. inermis* Hebard, *E. panfilovi* Bey-Bienko. Sono inoltre forniti alcuni altri dati su *Hamaxas feae* e *Eparchus dux*.

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